Facilities Management Division
Procedure

Review and Approval Cover Sheet

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History of Revisions

Document Number	Effective Date	Action	Description
FM PROC-100, R0		New	Establishes procedure to define the division work control program.

Table of Contents

1.0 Introduction

1.1 Purpose	This Work Control Procedure (WCP) defines the process for managing, processing and controlling work performed on buildings, installed equipment and other facility assets on the Auraria Campus. The WCP also provides an overview of duties and responsibilities in addition to referencing applicable directives and supporting documents that supplement this procedure.
1.2 Scope	This procedure applies to all in-house and/or contractor-performed work managed by the Facilities Management Division. The WCP outlines how requests for work are tracked and managed from cradle to grave. The Customer Support Department is the focal point for receiving, processing, scheduling, monitoring and closing facility-related work performed on campus buildings, assets and grounds. Elements covered in this process include how work is requested, work order management and control, developing recurring and preventive work, scheduling, material control, and planning and estimating. The architecture of this WCP encourages participation and interaction with outside departments and agencies. Involvement with entities such as Purchasing, Environment, Health and Safety (EH&S), Accounting, the State Department of Higher Education, Office of the State Architect, Denver Fire Department, and the City/County of Denver Agencies adds value to the process by making it more comprehensive and seamless to our campus customers.
1.3 Discussion	Effective work control is essential to providing timely and efficient facilities management services. The work control program coordinates the collective efforts of all departments and ensures optimal use of limited resources. The work control program is assigned to the Customer Support Department but requires the support of all division personnel. Development/monitoring of key performance indicators will assist management in making continual process improvements.

1.4 Definitions

Term:	**Definition:**
Assets	Facilities, structures, systems, installed equipment and components, open and common areas, parking lots, roadways and grounds inherent to the campus and integral to its operability.
Fee-for-service Work	Any work that requires the requesting unit or organization to pay for work done to its area.

Term:	Definition:
Computerized Maintenance Management System (CMMS)	Software application that tracks buildings and equipment, details when and how work orders are performed, and accumulates costs and maintenance history. Assists in managing resources in a cost effective and efficient manner.
Corrective Maintenance	Repair and restoration of equipment or components that have failed or are malfunctioning (not performing their intended function).
Deferred Maintenance	A listing of needed but unaccomplished maintenance tasks. Such situations arise because of shortages of funds or personnel.
Facility Enhancement	Change or upgrade to a building or system that improves or alters facility use.
Facility Services	Any work that involves providing facility-related technical services, including, but not limited to, custodial, pest control, grounds maintenance, snow and ice removal, engineering, and construction.
Facility Work	Any combination of erection, installation, assembly, disassembly, construction, demolition, or fabrication activities that are involved in creating a new facility or in maintaining, altering, adding to, or renovating an existing facility.
Hazard	The inherent characteristic of a material, condition, location, or activity that has the potential to cause injury or harm to workers, the public, property, or the environment.
Hazard Level	Classification system for determining the level of hazard associated with the defined scope of work. There are three levels – high/complex, moderate, and low.
Installed Equipment	Equipment affixed to the owner's buildings that is maintained by the facility manager, not the functional operator or line manager.
Job Hazard Analysis (JHA)	A documented process that identifies material properties, system elements, site/task hazards or events that could lead to harm or loss. The term hazard analysis may also include evaluation of consequences from an event or incident. Typical JHA documentation includes principal work steps, necessary permits, and required training.
Job Safety Review (JSR)	A pre-job meeting with Supervisor or Project Manager/Coordinator and workers to identify all hazards associated with each task, work order or project and to review all safety hazards that may be associated with task, work order or project.
Maintenance	The sum of the activities, both preventive and corrective, that is intended to preserve and restore the value or function of an asset.
Method of Procedure (MOP)	Document associated with utility/service outages. An MOP defines steps necessary to perform work, service activities, or modification projects. The document typically provides step-by step directions to ensure that all the activities or project tasks are identified, completed in the proper sequence, and safely accomplished according to technical requirements.

Term:	Definition:
Post-Maintenance/ Modification Testing	Means of verifying that assets meet current operating requirements before they are returned to service after preventive/corrective maintenance or modification or installation of a new system or component. The testing process should confirm that the original deficiency has been corrected and confirm that the assets can perform to their stated functional requirements.
Preventive Maintenance	Planned actions undertaken to retain an item at a specified level of performance by providing repetitive and/or scheduled tasks in order to prolong system operation and useful life. Preventive maintenance includes predictive, periodic, and planned (preventive) maintenance actions. Predictive maintenance involves monitoring and trending of equipment operating parameters to predict failure. Periodic maintenance involves action taken routinely, such as lubrication, cleaning, testing, adjusting, and inspection. Planned (preventive) maintenance includes those non-routine actions begun as a result of predictive or periodic maintenance to replace components before failure.
Priority	Designation of the importance and/or urgency to have a task performed. Work priorities are recorded in the CMMS.
Project	A unique effort within a program that normally has firmly scheduled beginning, intermediate, and end date milestones; prescribed scope of work; prescribed costs; and management, planning, and control commensurate with the complexity and importance of the project.
Punch List	A list of deficiencies, incomplete tasks, or unacceptable work items compiled by the Project Manager/Coordinator during the final inspection of a project.
Risk	The combination of the likelihood and the consequence of a specified hazard being realized. It is a measure of harm or loss associated with an activity.
Risk Management	The systematic application of policies, practices, and resources to the assessment and control of risk affecting human health and safety and the environment. Near zero risk can be very costly and in most cases is not achievable.
Site Hazard	Any hazard associated with a specific location, to include building, room, or other location where work is to be performed. This includes hazardous chemicals within the work area that workers may be exposed to during work.
Task Hazard	Any hazard that is associated with a discrete activity performed by a worker.
Standard Operating Procedure (SOP)	Document associated with repetitive work scopes. An SOP defines steps necessary to perform work and/or service activities. The document typically provides step-by step directions to ensure that all the activities or tasks are identified, completed in the proper sequence, and safely accomplished according to technical requirements.
Work Category	Designation of the nature of an activity.

Term:	Definition:
Work Instructions (WI)	Document associated with High/Complex or Moderate hazard work. Work Instructions are based on a Job Hazards Analysis. WI's typically include hazard identification, description of controls, and steps necessary to perform work and/or service activities. Step-by-step directions ensure that assigned work is completed in the proper sequence and safely accomplished according to technical requirements.
Work Order	An approved Work Request. Work Orders are generated within the CMMS and includes scope of work, priority, work category, and assigned department/shop.
Work Release	Discrete step by Shop Supervisor or designee. Implicit in work release is an assurance that the work is being performed by trained and qualified staff, the work is planned sufficiently to allow technically compliant and safe work practices, and that all materials are available to finish the work in a timely manner.
Worker	FM employee or contractor who performs or supervises work at the campus.

1.5 Acronyms	
Acronym:	**Definition:**
AHEC	Auraria Higher Education Center
CM	Corrective Maintenance
CMMS	Computerized Maintenance Management System
CSD	Customer Service Desk
EH&S	Environmental, Health, and Safety
FM	Facilities Management
HVAC	Heating, Ventilation, and Air Conditioning
iSD	I Service Desk (TMA Systems web entry page-CMMS)
JHA	Job Hazards Analysis
JSR	Job Safety Review
LOTO	Lock Out Tag Out
MOP	Method of Procedure
O&M	Operations and Management
PM	Project Management
PPE	Personal Protective Equipment
POW	Plan-of-the-Week.
SOP	Standard Operating Procedure
WI	Work Instructions

WO	Work Order

2.0 Responsibilities

2.1 Customers	• Provides an accurate and detailed description of the work to be performed and funding information as appropriate. • Submits requests for work to Facilities Management (FM) using any one of the following methods: o Work Order Request for Fee-for-service work to Customer Service Desk (CSD) in the FM building. o I Service Desk (iSD) web site entry (http://www.ahec.edu:82/index.html) o Telephone call to CSD (303.556.3260) during normal working hours for building/grounds maintenance needs.
2.2 Customer Support Representatives	• Receives and processes requests for work. o Ensures all necessary information is included (e.g. location and nature of problem, name, phone number, points of contact, proper account numbers, and departmental approvals, charge codes as needed, etc.). • Enters request into the Computerized Maintenance Management System (CMMS) and generates a Work Order (WO) number. o Assigns work classifications and priorities in accordance with Work Control Classifications and Priority Codes. o Sends receipt confirmation to customers for all written and interdepartmental work order requests when received. • Dispatches trades as classifications and priorities warrant. Provides WO numbers on all call outs. • Routes WOs to appropriate staff for action. • Coordinates scheduling of FM-managed work. • Closes out the completed WO. • Notifies management when unusual or emergency events, customer complaints, problem situations, or procedural issues arise. • Assists customers in any way possible including answering questions, routing phone calls to appropriate departments, and performing follow-up activities when applicable.

2.3 Shop Supervisors	• Ensures high priority WOs get prompt responses. • Determines hazard levels for assigned WOs. Consults with EH&S department on high hazard work. • Plans assigned work. o Ensures all EH&S procedures, regulatory agency requirements, codes and laws have been addressed including permits, certifications and approvals. o Estimates labor hours and material costs as needed. o Identifies and performs system tests or retest requirements for post-maintenance or post-modification work, as needed. • Coordinates work schedule with CSD. • Coordinates outages with facility occupants in accordance with outage procedures. • Releases work based on approved WOs. o Ensures that hazard controls are in place before work commences. o Additional work can be added to the work description or may require additional WOs as determined by Work Control. • Supervises performance of the assigned work. • Tracks labor hours and material costs in the performance of the work. • Notifies Customer Support when work is complete. • Remains aware of system-specific maintenance and operations history as well as current industry operating standards.

2.4 EH&S Representatives	• Consults with trades on high hazard work. Supports/monitors in-house and contractor-performed work as required. o Reviews maintenance and modification work packages for high/complex hazard work **before the work is performed** to develop and/or verify the adequacy of safety planning. • Plans assigned work. o Ensures all EH&S procedures, regulatory agency requirements, codes and laws have been addressed including permits, certifications and approvals. o Estimates labor hours and material costs as needed. o Identifies and performs system tests or retest requirements for post-maintenance or post-modification work, as needed. • Coordinates work schedule with CSD. • Coordinates outages with affected facility occupants. • Authorizes work based on approved work orders. o Ensures that hazard controls are in place before work commences. o Additional work can be added to the work description or may require additional WOs as determined by Work Control. • Supervises performance of the assigned work. • Tracks labor hours and material costs in the performance of the work. • Notifies Customer Support when work is complete. • Develops, provides, and monitors worker safety and health training. • Responds to emergency situations pertaining to EH&S issues (e.g. indoor air quality, chemical spills, etc.)

2.5 Project Management Representatives	• Receives Fee-for-service work orders and assigns to staff for action. • Assigns hazard levels to assigned WOs. Consults with EH&S department on high hazard work. • Plans assigned work. o Ensures all EH&S procedures, regulatory agency requirements, codes and laws have been addressed including permits, certifications and approvals. o Ensures system test or retest requirements for post-maintenance or post-modification work is performed, as needed. • Prepares cost estimates and project agreements for Fee-for-service work as necessary. • Coordinates work schedule with CSD. • Coordinates outages with affected facility occupants. • Authorizes work based on approved WOs. o Ensures that hazard controls are in place before work commences. o Additional work can be added to the work description or may require additional WOs as determined by Work Control. • Supervises performance of the assigned work. • Notifies Customer Support when work is complete. • Reviews billing documents and ensures work is invoiced.
2.6 FM Division Director	• Ensures campus buildings, assets, and grounds are efficiently and effectively maintained. • Ensures an effective work control process is in place for the campus. • Addresses concerns over WO funding determinations.

3.0 Requirements

Note	A flow diagram of the Work Control Process is shown in Appendix A.
3.1 Request for Work	• The customer submits a fully developed scope of work to the CSD. • If the request is for Fee-for-service work, the customer provides a charge code for the requested work and commits funding. o The funding is established to perform planning and execute work or to perform planning only. • Customer provides a targeted need date for the work.

3.2 Mitigating/ Stabilizing an Emergency	• CSD dispatches trades and notifies management about the emergency. • The Operations & Maintenance (O&M) Department Manager or designee (i.e., Superintendent or Shop Supervisor) authorizes immediate action to mitigate or stabilize the condition. As part of the immediate action, the O&M Manager or designee has authority to waive steps in this procedure (with exception of Hazard Level Determination and development of necessary safety controls) to ensure prompt and safe response to the emergency. • Necessary work documentation should be developed once the emergency situation is stabilized.
3.3 Processing Work Request	• The Customer Support Representative processes the work request. • The customer is consulted on an as-needed basis to provide/clarify necessary information. • Steps 3.3.1 to 3.3.4 describe the steps necessary to process the request and create an approved WO.
3.3.1 Work Request Review	• The Customer Support Representative reviews the Request for Work for completeness and adequacy of the work description, need date, and Fee-for-service accounting information as appropriate. • The Customer Support Representative resolves any outstanding items with the customer.
3.3.2 Priority & Work Classification	• Priorities are assigned for work that does not require extensive planning based on the following definitions: o **Emergency:** Work required to eliminate or mitigate an emergency condition. Typical emergency conditions impact life, property, security or the environment. Requests are handled immediately and work accomplished within 24 hours of notification. o **Urgent:** Work required take care of a condition that is a potential threat to life, property, security, the environment, or facility/equipment failure. Warrants expedited action to correct the situation before condition escalate or worsen o **Routine:** Work that does not qualify as emergency or urgent work, but should be accomplished within three business days after identifying the requirement or receipt of material. o **Interest:** Work that does not fit the definition of urgent work, but needs to be accomplished in an expedited time frame. Such work may be high profile in nature and/or have a short deadline date. Warrants expedited response; typically within seven business days. o **Deferred**: Work that has been intentionally delayed due to lack of funding, impending asset retirement, awaiting conflict resolution, long-term access issues, or has been subject to other administrative issues or constraints. • Work Classification codes are included at Appendix B.

3.3.3 Funding Decision	• Customer Support Representative makes an initial determination if a work request should be funded by FM. Examples include: - Maintenance to building systems and grounds. - Campus-wide services. - Common area maintenance (i.e., paint, flooring, etc.). - Customer Service Agreements (when available) provide additional guidance. • Customer Support Representative determines if a work request should be a Fee-for-service work order. Examples include: - Facility enhancements (i.e., modifications, new white boards, additional card readers, etc.). - Office/suite area improvements (i.e., new carpet, paint, etc.). - Departmental moves. - Customer Service Agreements (when available) provide additional guidance. • Issues with funding determinations should be addressed to Department Managers for resolution. If the issue cannot be resolved at the Department Manager level, the issue is sent to the FM Division Director for a decision.
3.3.4 Entry & Routing	• The Customer Support Representative enters the work request into the CMMS and generates a WO. o Generating a WO constitutes funding approval for the stated scope of work. o The WO clearly defines the scope of work, identifies priority, specifies the work category, identifies need date, provides charge codes as necessary, and identifies customer points of contact. • The Customer Support Representative transmits FM-funded WOs (not Fee-for-Service work orders) to the appropriate Shop Supervisor. • The Customer Support Representative coordinates with the Project Management (PM) Department and transmits Fee-for-Service work orders less than $500 to the appropriate Shop Supervisor. • The Customer Support Representative transmits Fee-for-Service work orders over $500 to the PM Department.
3.4 Planning & Scheduling	• The process for planning and scheduling FM-funded and low-cost Fee-for-Service work is different from the process for Fee-for-Service work over $500. Each process is defined below.

3.4.1 Determine Hazard Level	The Shop Supervisor or the Project Manager/Coordinator determines the hazard level for the work using the Hazard Grading Matrix at Appendix C. Supervisors or Project Managers/Coordinators may increase the hazard level of assigned work based on experience and judgment. Hazard level determination will drive the amount of planning and involvement by the EH&S staff in the work. • **Low Hazard:** This is the lowest level for hazards. Low hazard activities involve only hazards that could cause **negligible** harm or those associated with everyday living, routinely accepted by society, and controlled by means well known to the workers. Standard safety precautions are required for low hazard work • **Moderate Hazard:** Moderate hazard work involves hazards that inherently could cause **moderate** harm, such as injury requiring medical attention or leading to temporary disability and/or spills or unplanned releases of hazardous materials to the environment. In addition to the required standard safety precautions, a pre-job EH&S job hazard analysis (JHA) with the Supervisor or Project Manager/Coordinator is required for moderate hazard work. • **High/Complex Hazard:** This is the highest level for hazards and represents the greatest level of risk. High/complex hazard activities could cause **critical or catastrophic** harm to people, property, the environment, or the campus. Incident consequences include severe or fatal injuries, life-shortening diseases, permanent disabilities, major environmental contamination or permit violations. A pre-job JHA with EH&S staff, the Supervisor or Project Manager/Coordinator is required for high/complex hazard work. In addition, a Supervisor-led Job Safety Review (JSR) with all workers and EH&S staff is required just prior to the start of work.
3.4.2 Planning & Scheduling (FM-Funded Work & Fee-for-Service Work Less than $500)	• Shop Supervisor plans work ensuring compliance with safety requirements, applicable codes, and campus standards. • Shop Supervisor works with the Scheduler to schedule non-emergency work on the Plan of the Week (POW).

3.4.3 Planning & Scheduling (Fee-for-Service Work Over $500)	• PM Department Manager assigns project team. Member may include project manager/coordinator, designer, A/E, in-house trades, construction contractor, etc.) • Project Team reps meet with customer to: o Confirm scope of work, o Establish achievable customer need date, o Discuss budget availability and potential constraints, and o Develop initial project milestones for design and construction. • Project Team plans work based on agreed approach from customer meetings. o Develops in-house design documents as needed. o Develops detailed cost estimate for design and/or construction. o Prepares Project Agreement for customer approval. • Customer approves Project Agreement. Note: Purchasing requires an approved project agreement prior to soliciting for contract design and/or construction services. As a result, work schedules are not firm until the agreement is approved. • Project Team establishes firm work schedule in consultation with the Scheduler and includes on the POW. ○ Provides coordinated work schedule to customer.
3.5 Perform Work	• Shop Supervisor and/or Project Manager/Coordinator releases work. o Ensures workers are trained and qualified to perform work. o Verifies adequate measures have been taken to ensure worker safety. o Ensures outages have been coordinated with facility occupants in accordance with outage procedures. • Shop Supervisor and/or Project Manager/Coordinator: o Inspects in-progress work to ensure safe work practices. o Inspects finished work to verify workmanship, ensure adequate site clean up, and compliance with codes and trade practices. o Ensures workers perform post-maintenance and/or post-modification testing is done to verify system operability following work. • Shop Supervisor tracks in-house labor hours on a daily basis and ensures accurate accounting in CMMS. • Shop Supervisor and/or Project Manager/Coordinator notify Customer Service Representative when work is physically complete.

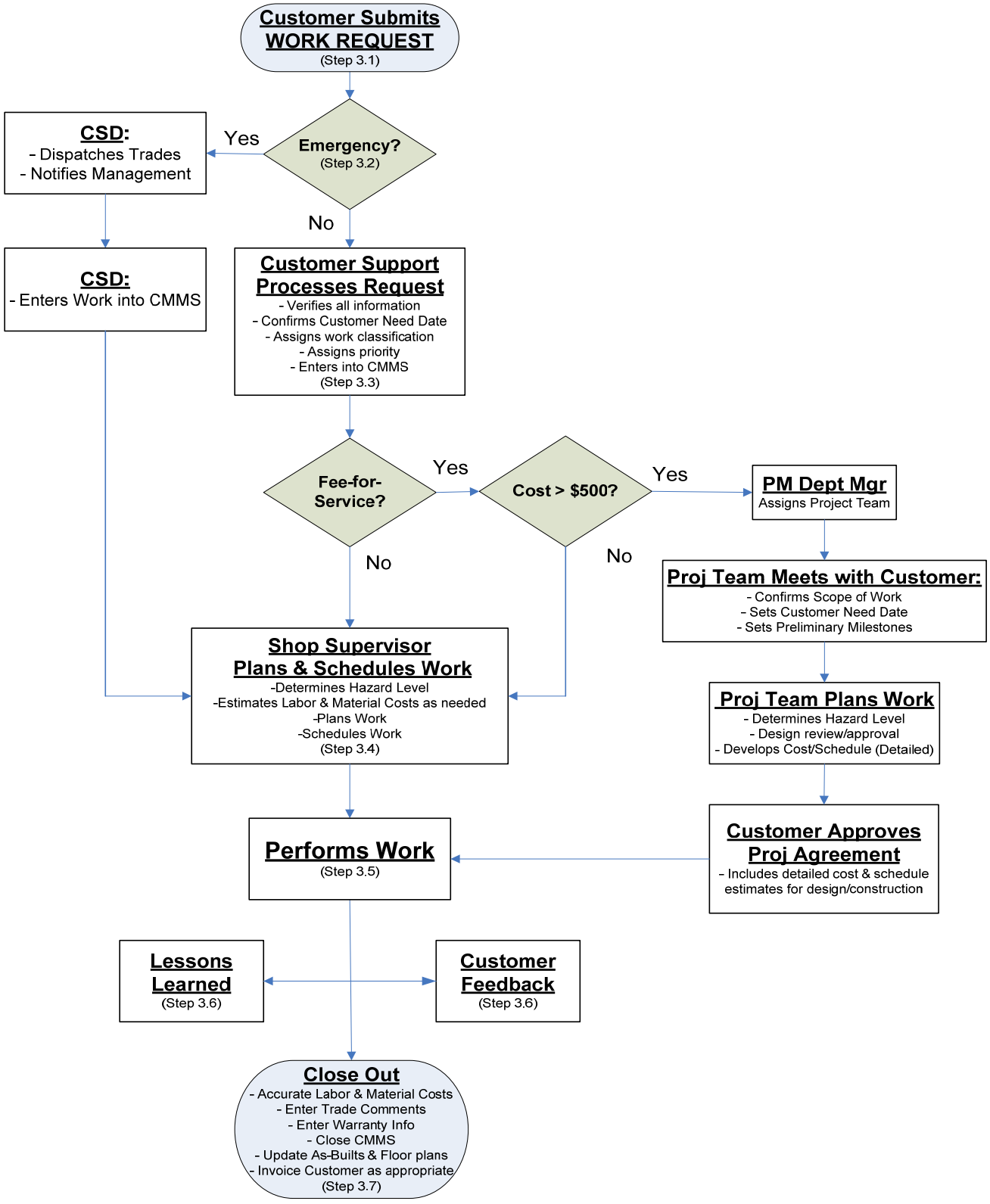
3.6 Lessons Learned & Customer Feedback	• At the completion of the work, the Supervisor (or designee) or Project Manager/Coordinator conduct a Lessons Learned meeting with personnel who were involved in the work.
	  o Attendees should represent all levels of worker with the objective to review what went well and what could be improved in future work.
	• The Supervisor (or designee) or Project Manager/Coordinator documents the results of the meeting, including any findings and recommendations and provides to the Customer Service Representative.
	• CSD solicits customer feedback via:
	  o Written request with a questionnaire,
	  o Electronic request using e-mail, or Web-based survey.
	• Customer Service Department provides feedback to management.

3.7 Work Closeout & Invoicing	• Customer Support Representative confirms accuracy of CMMS labor and material cost information with Shop Supervisor and/or Project Manager/ Coordinator. Once confirmed, Customer Support Representative closes WO in CMMS. • CSD enters maintenance history, Lessons Learned comments, and warranty information in CMMS. • CSD forwards modification information to PM Dept for As-Built updates. • Accounting sends invoicing documents to Fee-for-service customers. o PM Dept Mgr approves invoices prior to sending to customer. • Customer Support Dept archives closed WO documentation.

4.0 Appendices

Appendix	Title
A	Work Control Flow Chart
B	Work Categories
C	Hazard Grading Matrix

Appendix A
Work Control Flow Chart



Appendix B
Work Classifications

CMMS Work Order (WO) types and definitions are:

Campus Damage: WOs that pertain to the repair of damage caused to campus buildings and grounds from acts of nature, negligence and property damage from system failures, such as water leaks or extreme temperatures. The cost of repairs is funded primarily from insurance claim payments and restitution paid by involved parties.

Examples:

- Water damage from rainstorms
- Broken windows from wind or hail
- Damage from water leaks from pipes or plumbing fixtures

Campus Enhancement: Small to moderate sized projects that upgrade or add to existing facilities that are funded by the general operating budget. These projects can be a reaction to either a condition determined by the maintenance staff or from requests from campus customers.

Examples:

- Pour additional sidewalks where paths have been worn
- Add additional exterior lighting in poorly lit areas on campus
- Plant additional flowerbeds

Capital Construction: Projects that acquire real property, construct new facilities or additions to existing facilities, and result in major renovations of existing facilities. These projects are typically funded by specific appropriations from the State Capital Construction Fund. Capital Construction Funds cannot be used for any other purpose, cannot be co-mingled with other fund sources, and cannot be used to fund state employee salaries.

Examples:

- Design and construction of new classroom buildings
- Complete renovation of an existing building
- Replacement of major mechanical/electrical systems

Fee-for-service Work (<$500): This work is performed based on a signed work request form. Work request forms must contain department account numbers and proper signatures before the work can be performed.

Examples:

- Hang pictures and bulletin boards in non-academic spaces
- Make and install name plates
- Non-Academic furniture moving and repair

Fee-for-service Work (>$500): This work is performed based on a formal written agreement between FM and the customer before work can begin. Once approved, the Customer Support Representative creates a project in CMMS and WOs are initiated to track costs for labor and materials as needed. The work is invoiced to the appropriate customer in accordance with project procedures.

Examples:

- Design and construction of space remodel
- Abatement and new floor covering
- Build out for new room

Controlled Maintenance: These state-funded projects complete major maintenance and repair on campus buildings. Projects include mandated system changes to existing facilities and/or replacement of mechanical and life safety systems. Typically, these projects are too high in cost to be accommodated by the general operating budget, and are funded by specific appropriations from the State Capital Construction Fund. There are spending restrictions on the funding.

Examples:

- Replace a roof or several roofs on existing buildings
- Install back-flow preventers to meet code requirements
- Replace chillers or cooling towers

Corrective Maintenance: Repair and restoration of equipment or components that have failed or are malfunctioning (not performing their intended function). These tasks can be a reaction to either a condition determined by the maintenance staff or from requests from campus customers.

Examples:

- Adjust temperature in building (hot/cold calls)
- Clear clogged toilets
- Spot replacement of burned out light bulbs/lamps
- Replacement of a failed pump

Deferred Maintenance: These are maintenance and repair projects affecting existing facilities. These projects are higher in cost than what normally can be afforded in the general operating budget, but are not large enough individually to qualify for controlled maintenance funding. Such projects often include a listing of needed but unaccomplished maintenance tasks, repairs, or replacements that result from a backlog of such work normally completed through routine maintenance and repair.

Examples:

- Replace medium cost HVAC/plumbing/electrical fixed equipment (i.e., pumps, fans, air terminal units, lights, etc.)
- Replace automatic swing-out doors with sliding door
- Eliminating trip hazards on campus

Preventive Maintenance: Planned actions undertaken to retain an item at a specified level of performance by providing repetitive and/or scheduled tasks in order to prolong system operation and useful life. Preventive maintenance includes predictive, periodic, and planned (preventive) maintenance actions:

Examples:

- Changing filters and belts in HVAC equipment
- Changing oil and filters in motor vehicles
- Mandated inspections of equipment and systems (Fire Alarm/Sprinkler & Pump, Boilers, Elevators, back-flow, etc.)

Scheduled Maintenance: Tasks that are scheduled in advance based on a predetermined basis, such as frequency (once a month, etc.), metered (once every 100 hours of operations), or triggered by events. Scheduled maintenance pertains to qualitative or appearance standards, such as attractive interiors and mowed lawns, and make no difference to life cycle. The level of effort in this area is subjective, adjustable, and often determined by available operating budget.

Examples:

- Painting interior walls on a set schedule
- Grounds maintenance, including mowing lawns and trash pick-up
- Carpet cleaning

Support/Non-Chargeable: This is work that has little or nothing to do with the maintenance and repair of facilities and grounds, but is typically performed by FM staff for campus customers. These are general support type tasks that do not change spaces or appearance of the campus. These tasks are generally performed in academic spaces or for academic programs.

Examples:

- Repair of classroom furniture
- Moving classroom furniture

Vandalism: These are tasks required to return a piece of equipment, asset or entity back to its normal condition after acts of willful or malicious destruction to campus property. Damage reports are coordinated with the campus Risk Manager.

Examples:

- Remove graffiti from buildings, walls, and walks
- Replace broken glass
- Reinstall thermostats torn from walls

Appendix C
Hazard Grading Matrix

Hazard Grading Questions	Work Examples
Does the work involve only hazards that could cause **negligible** harm or those associated with everyday living, routinely accepted by society, and controlled by means well known to the workers? **YES – WO Hazard level is LOW** **NO – answer question below**	**Examples of Low Hazard Work** • Filtered respiratory protection used on the basis of personal choice • Routine bucket-truck or fork-truck work by trained personnel • Routine carpentry work (e.g., hanging bulletin boards, erecting office partitions, etc.) • Routine mechanical work (e.g., run air lines, realign coupling, repack valve, etc.) • Routine restroom repairs • Work on energized systems under 50 volts • Manually lifting less than 50 pounds • Use of a step stool or ladder less than six feet high
Does the work involve hazards that inherently could cause **moderate** harm, such as: • injury requiring medical attention or leading to temporary disability, or • spill or unplanned release to the environment of hazardous materials? **Note:** This question and the following one may be answered no if engineered controls have been established, thoroughly reviewed, and proven highly reliable in minimizing the risks without active worker involvement (e.g., commercial insulation on electrical wiring). **NO – WO Hazard level is LOW (unless stipulated by Supervisor or Project Manager/Coordinator)** **YES – answer questions below**	**Examples of Moderate Hazard Work** • Bucket-truck use within 10 feet of a non-insulated, energized line • Working more than 6 feet above the surface or needing fall protection • Cutting, welding, and/or other spark-producing activities • Tasks that create a hazardous/flammable gas hazard • Use of PPE other than safety gasses, gloves, steel-toe shoes, ear plugs, and/or hard hats • Use of any hoisting and rigging equipment in excess of 75% of the rated capacity • Fire protection system impairment • Tasks that generate hazardous waste • Work on energized systems with voltages greater than 50 volts but less than 600 volts • Work with hazardous chemicals, materials, asbestos, radiation, or biohazards • Use of hazardous pressure, vacuum, or cryogenic systems • Manually lifting more than 50 pounds by a single person
1. Does the work involve hazards that inherently could cause **critical or catastrophic** harm to people, property, the environment, or the campus, such as: • severe or fatal injuries, life-shortening disease, permanent disability, • major environmental contamination or permit violation? 2. Does the work involve unfamiliar hazards or a combination of **moderate** hazards (as defined above) and significant complexity? 3. Does the work have a history of serious ES&H events or near misses?	**Examples of High Hazard/Complex Work** • Use of large amounts of stored electrical energy (e.g. large capacitor banks) • Use of large quantities of highly toxic or dangerous materials • Use of materials that if released could cause major environmental contamination • Work with a combination of trades and/or multiple workers requiring precise sequencing and careful coordination of their activities to manage the risks • Work with multiple hazards with potentially conflicting controls • Potential for rapidly changing work-area conditions • Non-routine or infrequently performed work where worker proficiency is important to managing the risks • Entering environments where unevaluated hazards may exist (e.g. confined spaces)
NO (to all 3 questions in block above) – WO Hazard Level is Moderate (conduct formal JHA with EH&S) **YES (to any of these 3 questions) -- WO is Hazard Level is High/Complex (conduct formal JHA and JSR with EH&S)**	